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**A pest of African Mahogany detected for the first time in Mozambique and Burkina Faso: *Pseudophacopteron zimmermanni* (Aulmann) (Hemiptera: Psylloidea: Phacopteronidae)**

**Abstract** - *Pseudophacopteron zimmermanni* is reported for the first time in Mozambique (Niassa Province, Cuamba) and Burkina Faso (Ouagadougou). *P. zimmermanni* induces striking galls on leaves of *Khaya anthotheca* (East African Mahogany; Red Mahogany), in Mozambique, and *Khaya senegalensis* (African Mahogany; Senegal Mahogany), in Burkina Faso.

**Resumo** - Uma praga do mogno africano capturada pela primeira vez em Moçambique e Burkina Faso: *Pseudophacopteron zimmermanni* (Aulmann) (Hemiptera: Psylloidea: Phacopteronidae).

*Pseudophacopteron zimmermanni* foi capturado pela primeira vez em Moçambique, província do Niassa, distrito de Cuamba, e em Burkina Faso, Ouagadougou. Trata-se dum Psilídeo que causa a formação de galhas nas folhas de *Khaya anthotheca* (Mubáua; Umbáua), em Moçambique, e *Khaya senegalensis* (Caïlcedrat; Acajou de la savane), em Burkina Faso.

**Riassunto** - Un insetto galligeno dannoso al Mogano africano trovato per la prima volta in Mozambico e Burkina Faso: *Pseudophacopteron zimmermanni* (Aulmann) (Hemiptera: Psylloidea: Phacopteronidae).

*Pseudophacopteron zimmermanni* è stato catturato per la prima volta in Mozambico (Distretto di Cuamba, Provincia del Niassa) e Burkina Faso (Ouagadougou). Si tratta di uno Psillide che causa la formazione di vistose galle sulle foglie di due importanti specie di Mogano africano: *Khaya anthotheca*, in Mozambico, e *Khaya senegalensis*, in Burkina Faso.

**Key words:** *Pseudophacopteron zimmermanni*, Phacopteronidae, African Mahogany, Mozambique, Burkina Faso.

## INTRODUCTION

*Khaya anthotheca* (Welw.) C. DC. (= *nyasica* Stapf ex Baker f.) and *Khaya senegalensis* A. Juss. (Meliaceae) are African plants very important for their wood, known with the name of "African mahogany". Their wood is red, with beautiful grain, heavy, easy to work and preserved

even in contact with the ground. Termites and Bostrychidae do not attack them (Gomes e Sousa, 1951). However, the apical shoots can be damaged by the caterpillars of the Cedar Tip Moth (*Hypsipyla robusta* (Moore) (Lepidoptera: Pyralidae; Phycitinae), leading to the formation of side branching and, ultimately, a deformed trunk. This moth species is widely distributed in the tropics of the old world; in Africa it is known from Ghana, Madagascar, Malawi, Mauritius, Nigeria, Sierra Leone, Tanzania and Uganda.

*Khaya anthotheca* is native of Democratic Republic of Congo, Malawi, Mozambique, Tanzania, Uganda, Zambia and Zimbabwe (Wyk & Wyck, 1997). In Mozambique it is known with the names of Mubáua and Umbáua (in Macua language). It is a large tree, sometimes exceeding 60 m in height, with bark grey to brown, mainly smooth, but flaking off in characteristic scales (Katende A. B. et al., 1995; Mbuya L. P. et al., 1994). The timber is widely used in Eastern Africa.

*Khaya senegalensis* is native of Cameroon, Central African Republic, Chad, Equatorial Guinea, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Mali, Niger, Nigeria, Senegal, Sierra Leone, Sudan, Togo and Uganda. In Mozambique it is not present; in Burkina Faso, where it is known with the French name of "Caïlcédrat" or "Acajou de la savane", it is present, because cultivated (in Ouagadougou it flanks the main avenues). It is a deciduous evergreen tree, 15 - 30 m high, up to 1 m in diameter, with a clean bole to 8 - 16 m, buttresses not prominent or absent, with bark dark grey, with small, thin, reddish-tinged scales, slash dark pink to bright crimson, exuding a red sap. As this is one of the hardest African mahoganies and the hardest of the *Khaya* species, the timber is widely used on a commercial scale particularly in West Africa (Katende A. B. et al., 1995).

In 2005 and 2006, some young plants of *Khaya anthotheca* present in the campus of the Faculty of Agriculture of the Catholic University of Mozambique in Cuamba (Niassa Province, Mozambique) showed the presence on the leaves of many galls, caused by an unknown insect (Fig. 1).

In 2007, similar galls were observed also on leaves of many plants of *Khaya senegalensis* in Ouagadougou (Burkina Faso) (Fig. 2).

The insects emerging from the above galls were demonstrated to belong to Hemiptera Psylloidea. The importance of the timber of the above species of *Khaya* suggested to try to identify the above psyllids. For this reason, specimens emerged from the galls were sent for identification to Dr. Daniel Burckhardt (Naturhistorisches Museum, Basel, Switzerland), specialist of African Psylloidea. With the assistance of Dr. Igor Malenovský (Department of Entomology, Moravian Museum, Brno, Czech Republic), he identified them as *Pseudophacopteron zimmermanni* (Aulmann, 1912) (Phacopteronidae).

Phacopteronidae is a very small family of Psylloidea, currently including three genera and about 22 species. However, many further new species await description (Burckhardt, pers. comm.). The family has a pantropical distribution and has its hosts in the Rutales (Anacardiaceae, Burseraceae, Meliaceae, Sapindaceae), in addition to Apocynaceae. Several species are gall-inducers.

The genus *Pseudophacopteron* Enderlein, 1921, is widely distributed in the Afrotropical, Australian, Oriental and Neotropical region. One of the most economically important species is *Ps. zimmermanni* (Aulmann), known from Nigeria, Senegal, Tanzania and Uganda. It is new for Mozambique and Burkina Faso. The galls induced by this species were described and figured by Aulmann (1912) and Houard (1922). Schabel (2006) reported galls on *Khaya anthotheca* in Morongoro (Tanzania).



Fig. 1. - Leaves of *Khaya anthotheca* (Welw.) C. DC. showing galls induced by *Pseudophacopteron zimmermanni* (Aulmann) (Mozambique, Cuamba, May 2007).



Fig. 2. - Leaves of *Khaya senegalensis* A. Juss. showing galls induced by *Pseudophacopteron zimmermanni* (Aulmann) (Burkina Faso, Ouagadougou, September 2007).

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